

FIG.1

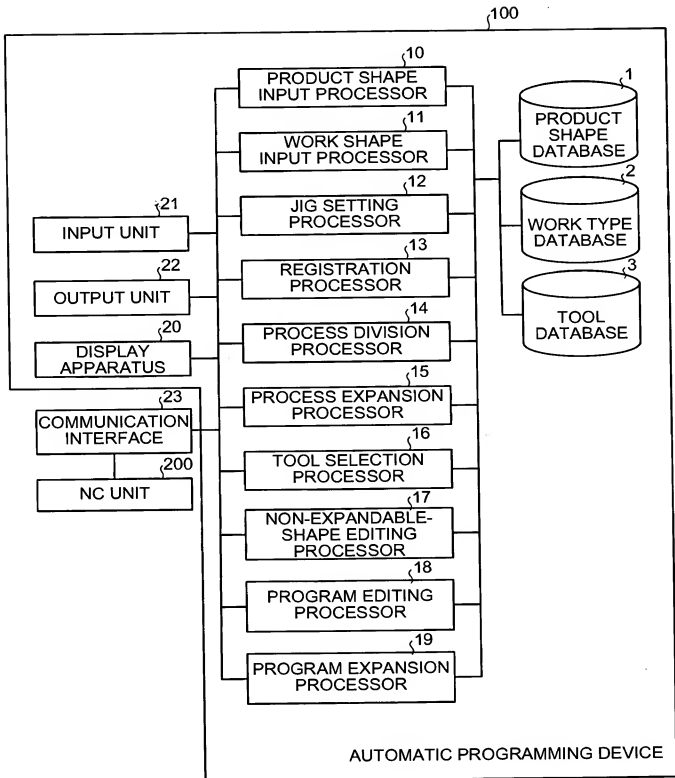


FIG.2

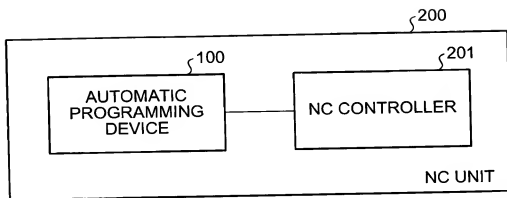
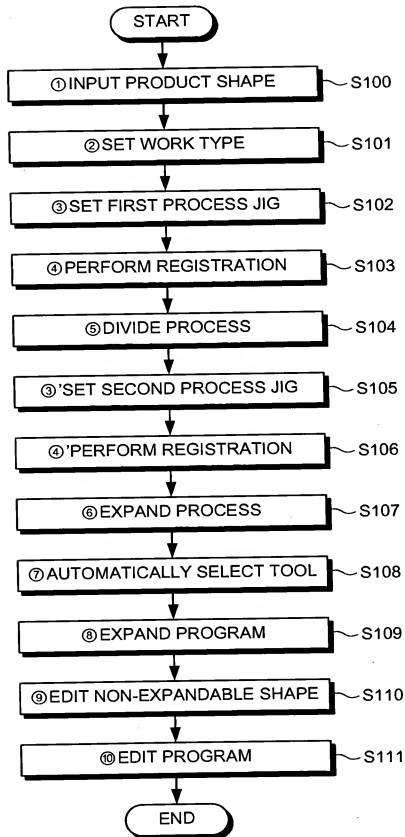


FIG.3



MENU SELECTION MAIN SCREEN



FIG.5

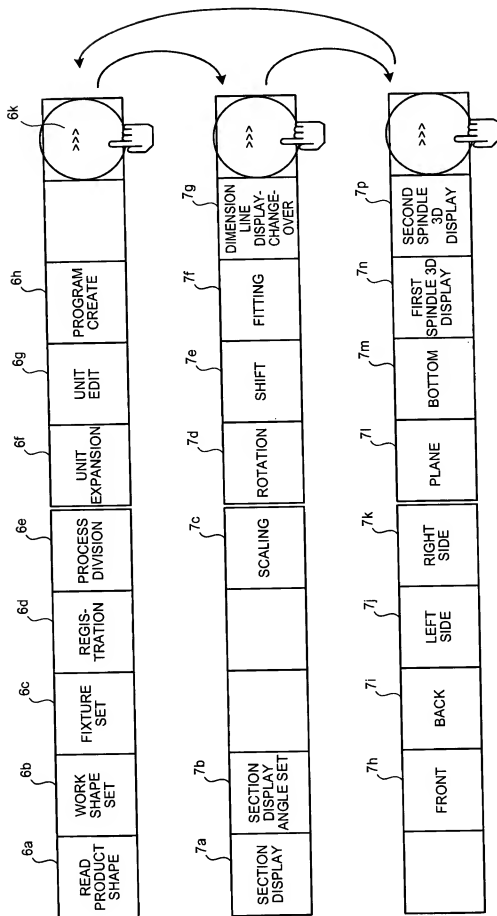
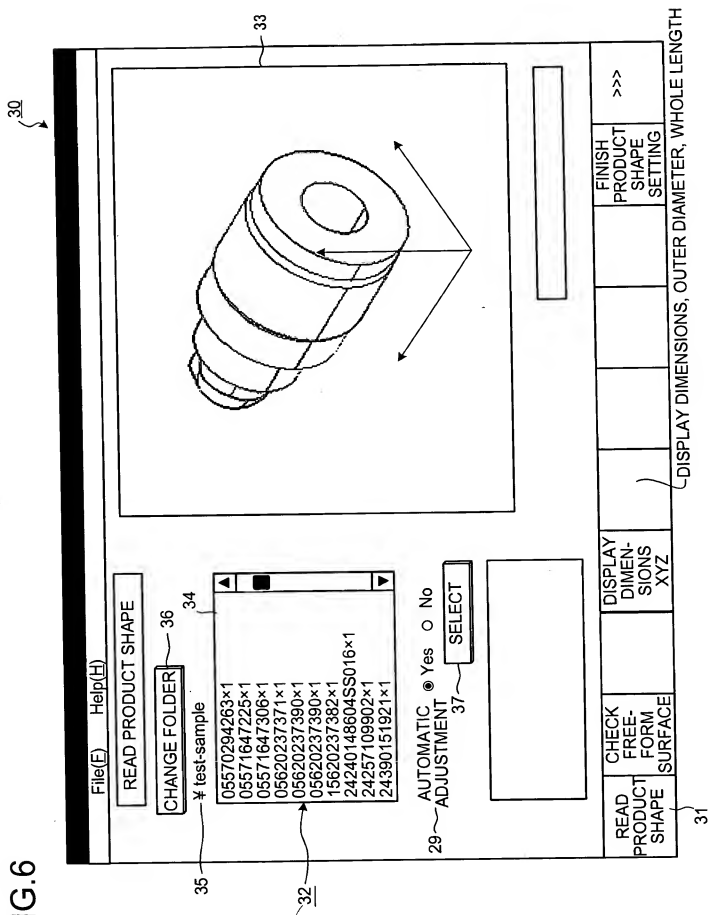


FIG.6



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FIG. 7

9a

9b

9c

9d

9e

9f

9g

WORK DATABASE

SET PARTIAL WORK

READ WORK MODEL

SET WORK MATERIAL

EDIT

CHANGE MACHINING ALLOWANCE

301

303

300

302

304

305

PRODUCT SHAPE

X

Y

Z

100

100

100

No.	WORK MATERIAL	TYPE	OUTER DIAMETER	INNER DIAMETER	LENGTH
1	A7075	ROUND BAR	110.000	0.000	130.000
2	A5056	ROUND BAR	110.000	0.000	130.000
3	A7075	ROUND BAR	120.000	0.000	130.000
4	A5056	ROUND BAR	120.000	0.000	130.000
5	CBN STL	ROUND BAR	120.000	0.000	130.000
6	STNLESS	ROUND BAR	130.000	0.000	130.000
7	STNLESS	ROUND BAR	140.000	0.000	130.000
8	A7075	ROUND BAR	150.000	10.000	130.000
9	A7075	ROUND BAR	150.000	10.000	130.000
10	A7075	ROUND BAR	150.000	10.000	130.000
11	A7075	ROUND BAR	150.000	10.000	130.000
12	A5056	ROUND BAR	120.000	0.000	130.000

WORK SHAPE SETTING

No.

3

WORK MATERIAL

A7075

WORK TYPE

ROUND BAR

OUTER DIAMETER

120

INNER DIAMETER

0

LENGTH

130

END-FACE MACHINING ALLOWANCE

0

OK

3

OK

FIG.8

WORK SHAPE

MATERIAL	TYPE	OUTER DIAMETER	INNER DIAMETER
CBN STL	Cylinder	250	20	
CBN STL	Cylinder	250	30	
CBN STL	Cylinder	250	40	
CBN STL	Cylinder	250	50	
CBN STL	Cylinder	400		
CBN STL	Cylinder	400	30	
CBN STL	Cylinder	500		
CBN STL	Cylinder	800	70	
CBN STL	Cylinder	800	100	
CBN STL	Hexagon	300		
CBN STL	Hexagon	300		
CBN STL	Hexagon	400		

FIG.9

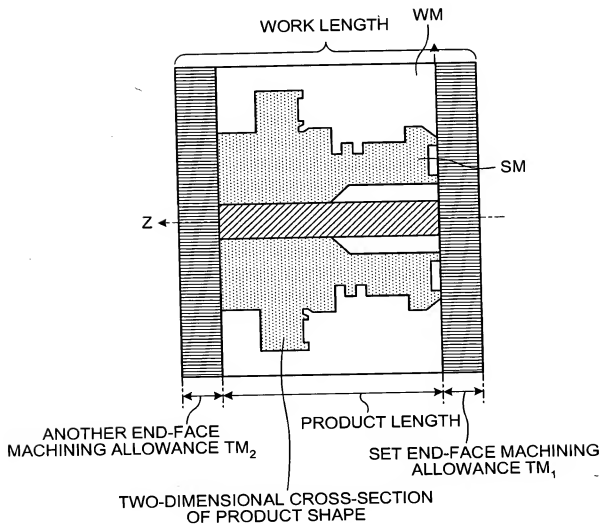
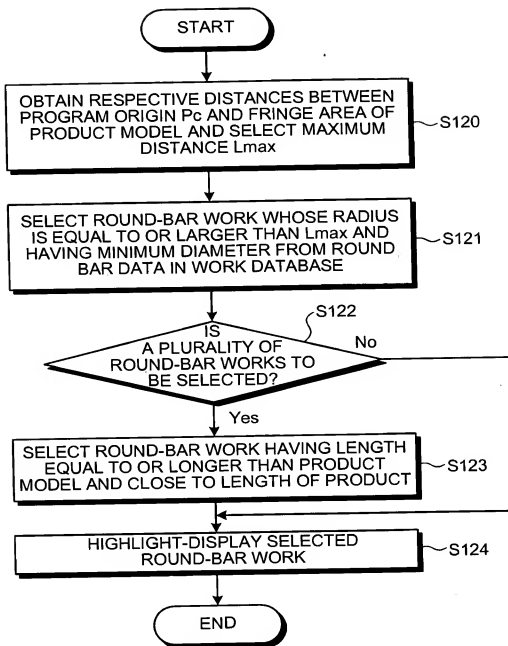


FIG.10



POINT ON PRODUCT SHAPE

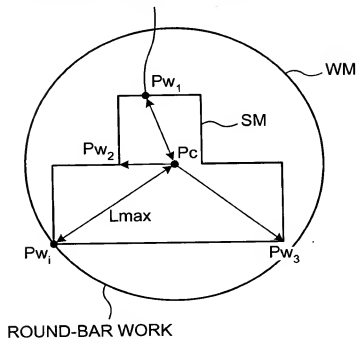


FIG.12

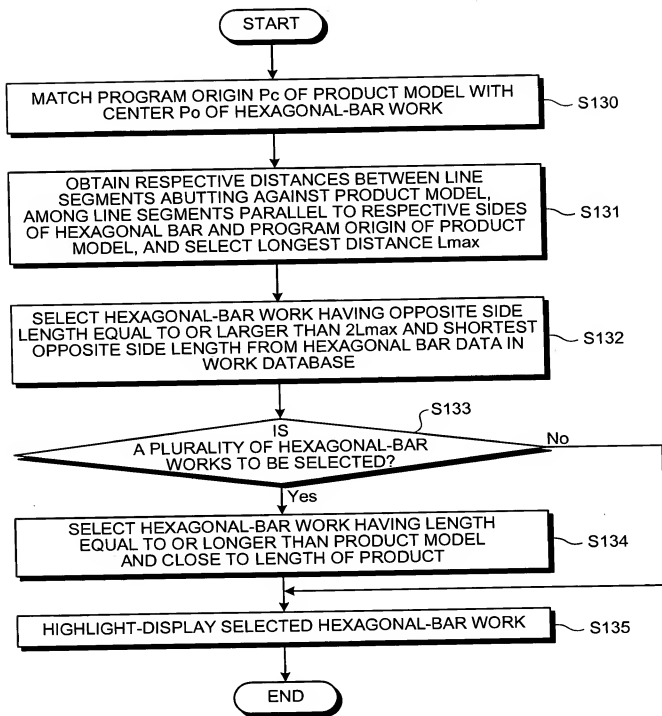
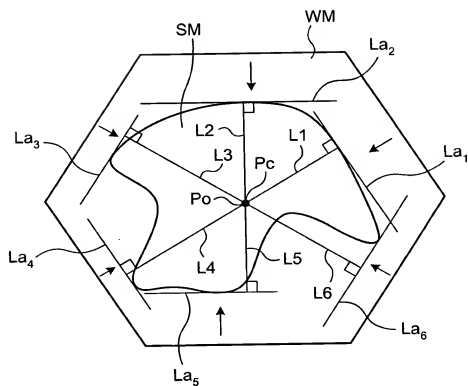


FIG.13



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FIG.14

9a

9b 9c 9d 9e 9f 9g

WORK DATABASE SET PARTIAL WORK READ WORK MODEL SET WORK MATERIAL EDIT CHANGE MACHINING ALLOWANCE

301

WORK SHAPE SETTING

PRODUCT SHAPE X Y Z 100 100 100

303

No.	WORK MATERIAL	TYPE	OUTER DIAMETER	INNER DIAMETER	LENGTH
3	A7075	ROUND BAR	120.000	0.000	130.000
9	A5056	ROUND BAR	120.000	0.000	140.000
100	CBN STL	ROUND BAR	120.000	0.000	150.000
5	STNLESS	ROUND BAR	130.000	0.000	130.000
15	STNLESS	ROUND BAR	140.000	0.000	130.000
20	STNLESS	ROUND BAR	150.000	10.000	130.000
23	A7075	ROUND BAR	150.000	10.000	160.000
91	A7075	ROUND BAR	150.000	10.000	160.000
94	A7075	ROUND BAR	150.000	10.000	170.000

300

302

304

3 3 OK

305

WORK SHAPE SETTING

No. 3

WORK MATERIAL A7075

WORK TYPE ROUND BAR

OUTER DIAMETER 120

INNER DIAMETER 0

LENGTH 130

END-FACE MACHINING ALLOWANCE 0

OK

FIG.15

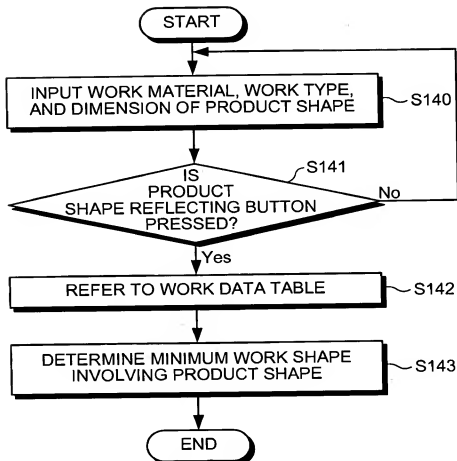


FIG.16

WORK SHAPE SETTING

PRODUCT SHAPE

REFLECT PRODUCT SHAPE

X 180 Y 180 Z 150

WORK SHAPE SETTING

WORK MATERIAL: CBN STL

WORK TYPE: ROUND BAR

OUTER DIAMETER: 254.5584

INNER DIAMETER: 0

LENGTH: 150

END-FACE MACHINING ALLOWANCE: 0

CREATE

40

43

41

42

44

45

46

47

48

49

50

58

CBN STL	ROUND BAR	OUTER DIAMETER	250.0	INNER DIAMETER	20.0	LENGTH	800.0
CBN STL	ROUND BAR	OUTER DIAMETER	250.0	INNER DIAMETER	30.0	LENGTH	800.0
CBN STL	ROUND BAR	OUTER DIAMETER	250.0	INNER DIAMETER	40.0	LENGTH	800.0
CBN STL	ROUND BAR	OUTER DIAMETER	250.0	INNER DIAMETER	50.0	LENGTH	800.0
CBN STL	ROUND BAR	OUTER DIAMETER	400.0	INNER DIAMETER	0.0	LENGTH	500.0
CBN STL	ROUND BAR	OUTER DIAMETER	400.0	INNER DIAMETER	30.0	LENGTH	500.0
CBN STL	ROUND BAR	OUTER DIAMETER	500.0	INNER DIAMETER	0.0	LENGTH	300.0
CBN STL	ROUND BAR	OUTER DIAMETER	500.0	INNER DIAMETER	70.0	LENGTH	300.0
CBN STL	ROUND BAR	OUTER DIAMETER	800.0	INNER DIAMETER	0.0	LENGTH	500.0
CBN STL	ROUND BAR	OUTER DIAMETER	800.0	INNER DIAMETER	100.0	LENGTH	500.0

FIG.17

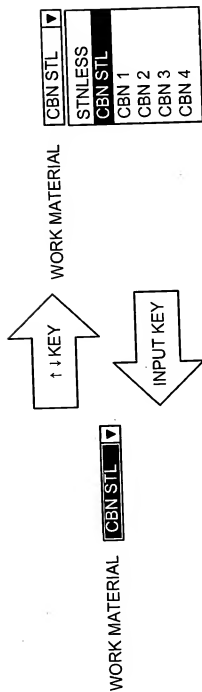


FIG. 18

WORK MATERIAL	CEN STL				
WORK TYPE	ROUND BAR				
OUTER DIAMETER	254.5584				
INNER DIAMETER	0				
LENGTH	150				
END-FACE MACHINING ALLOWANCE	0				

KEY

KEY

KEY

CBN STL

WORK MATERIAL

WORK TYPE

ROUND BAR

OUTER
DIAMETER

254 5584

INNER
DIAMETER

0

LENGTH

150

END-FACE
MACHINING
ALLOWANCE

0

30.0	CBN	STL	ROUND	BAR	OUTER DIAMETER	250.0	INNER DIAMETER	200.0
40.0	CBN	STL	ROUND	BAR	OUTER DIAMETER	250.0	INNER DIAMETER	40.0
50.0	CBN	STL	ROUND	BAR	OUTER DIAMETER	250.0	INNER DIAMETER	50.0
0.0	CBN	STL	ROUND	BAR	OUTER DIAMETER	400.0	INNER DIAMETER	0.0
30.0	CBN	STL	ROUND	BAR	OUTER DIAMETER	400.0	INNER DIAMETER	30.0
0.0	CBN	STL	ROUND	BAR	OUTER DIAMETER	400.0	INNER DIAMETER	0.0
70.0	CBN	STL	ROUND	BAR	OUTER DIAMETER	800.0	INNER DIAMETER	70.0
100.0	CBN	STL	ROUND	BAR	OUTER DIAMETER	800.0	INNER DIAMETER	100.0

20.0
30.0
40.0
50.0
0.0
30.0
0.0
70.0
100.0

FIG.19

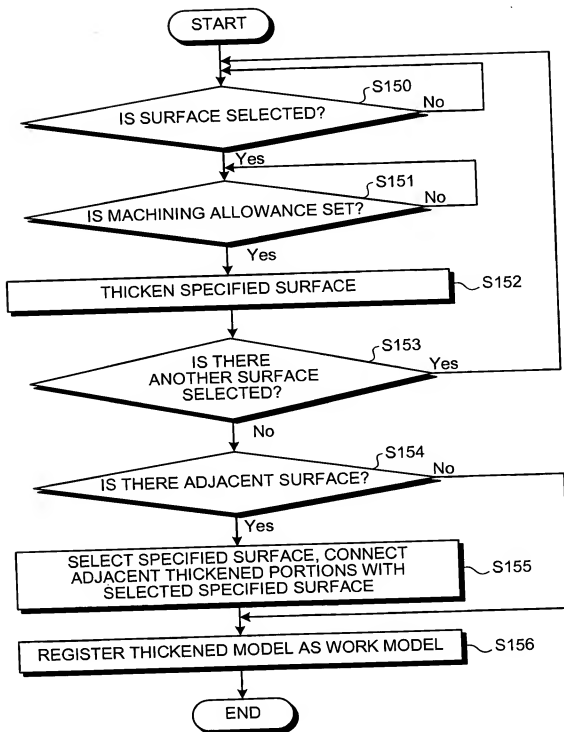


FIG. 20

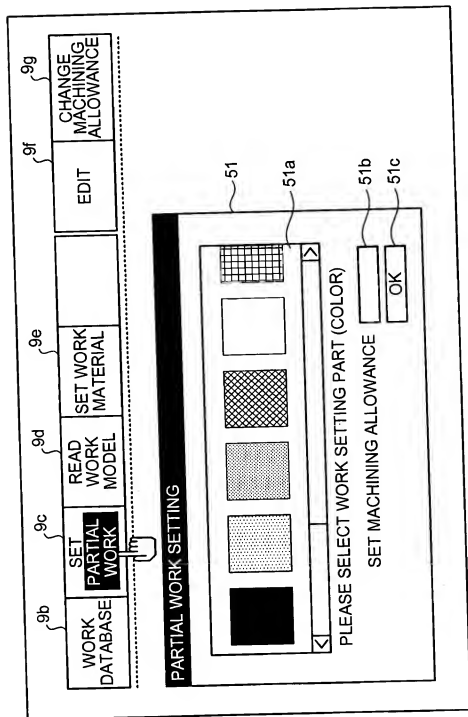


FIG.21

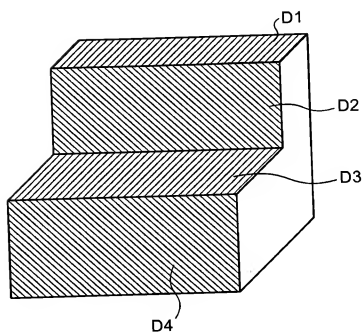


FIG.22

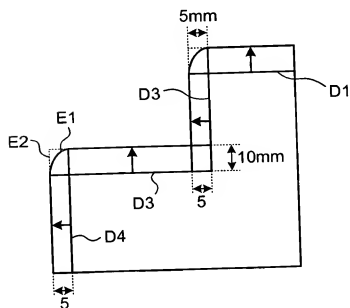


FIG.23

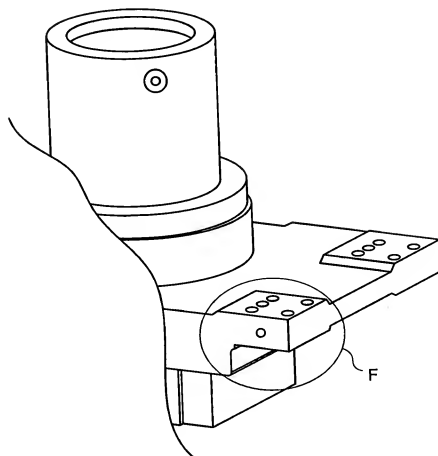


FIG.24

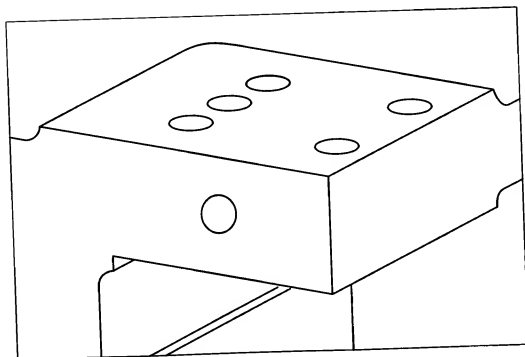


FIG.25

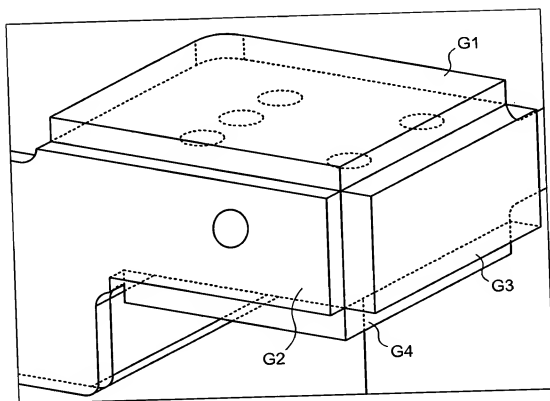


FIG.26

52

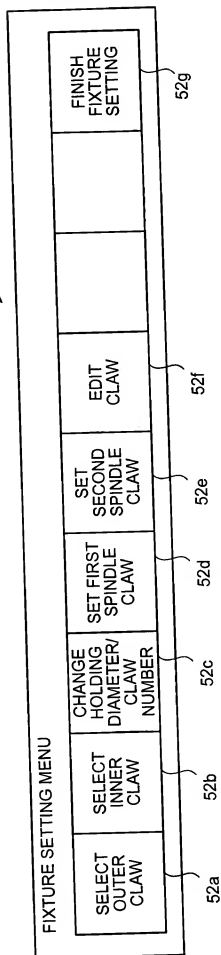


FIG.27

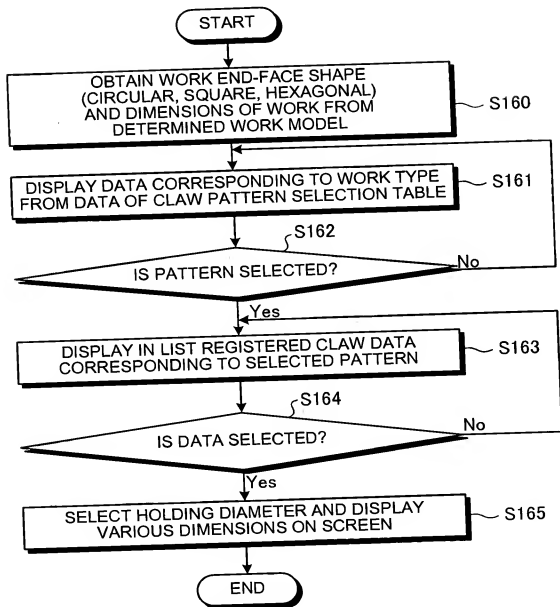


FIG.28

53

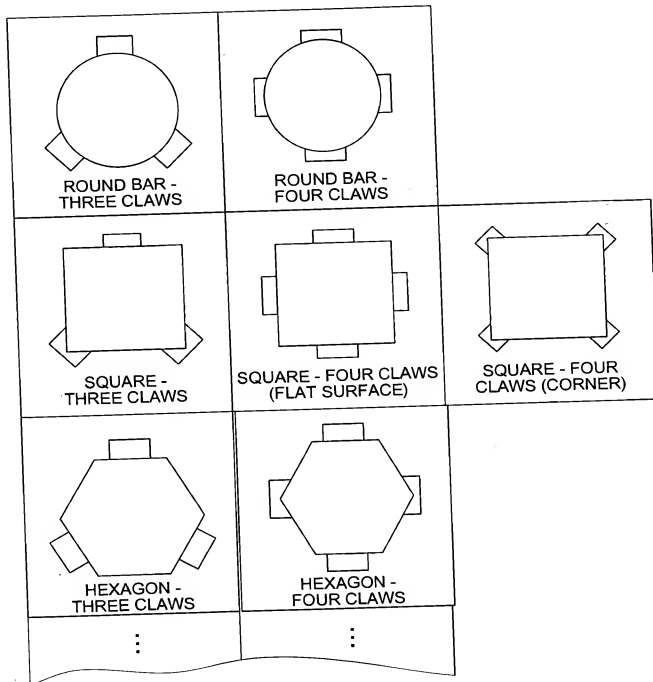
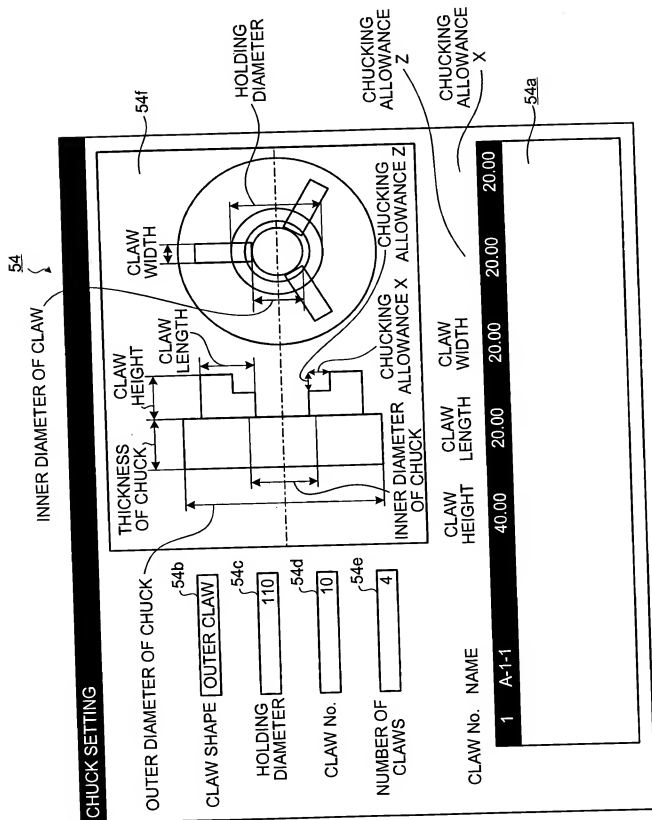


FIG. 29



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FIG.30

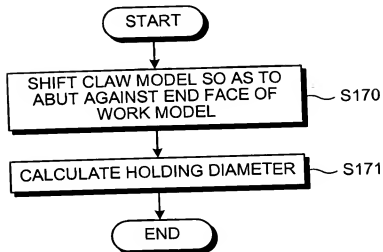


FIG.31

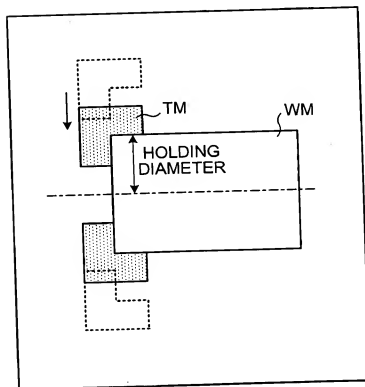


FIG.32

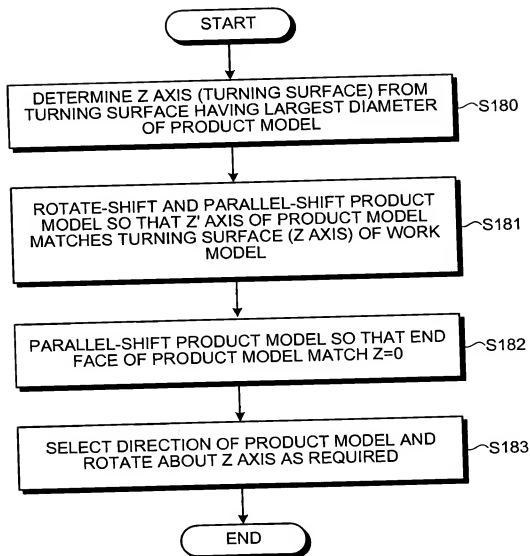


FIG.33

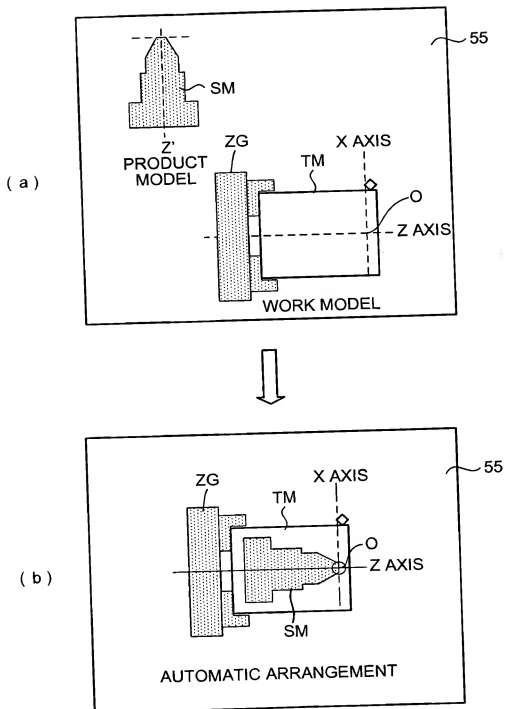


FIG.34E

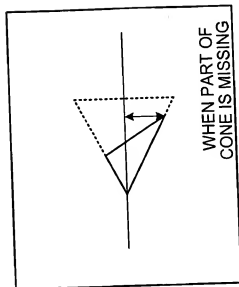


FIG.34B

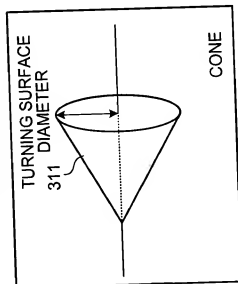


FIG.34A

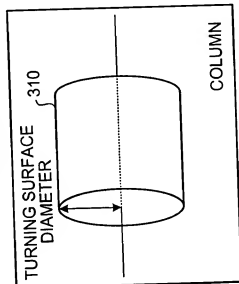


FIG.34D

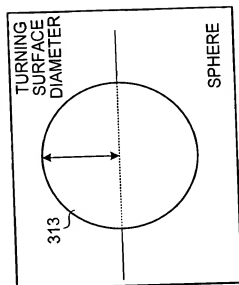


FIG.34C

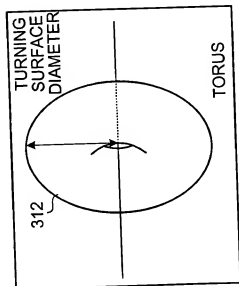
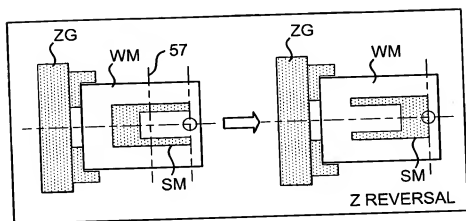


FIG.35



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FIG.36

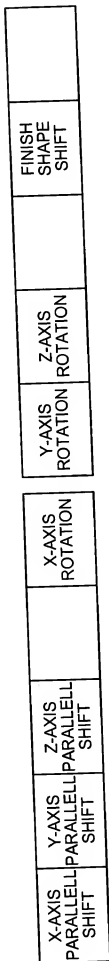


FIG.37

SHAPE SHIFT

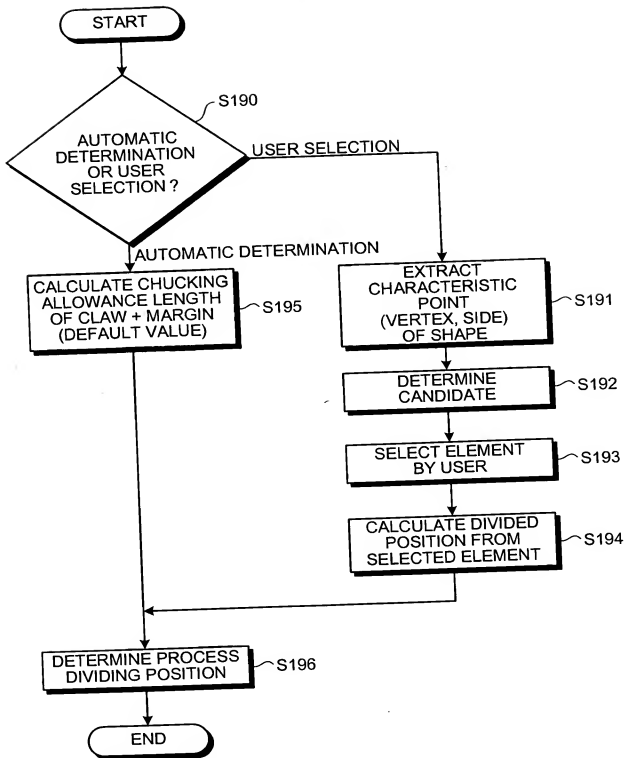
☒ PRODUCT SHAPE 60
☐ WORK SHAPE
☐ FIRST CHUCK SHAPE
☐ SECOND CHUCK SHAPE

STEP AMOUNT 0 61

SHIFT AMOUNT 0 62

SHIFT 63

FIG.38



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FIG.39

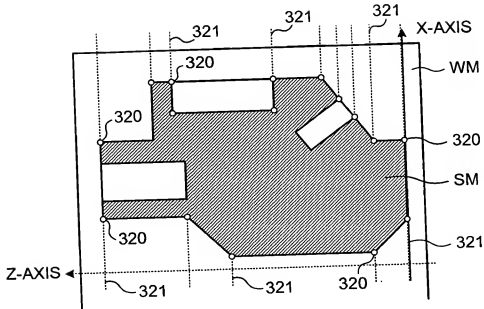


FIG.40

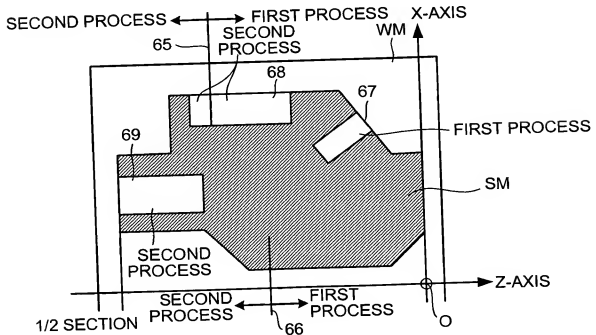


FIG.41

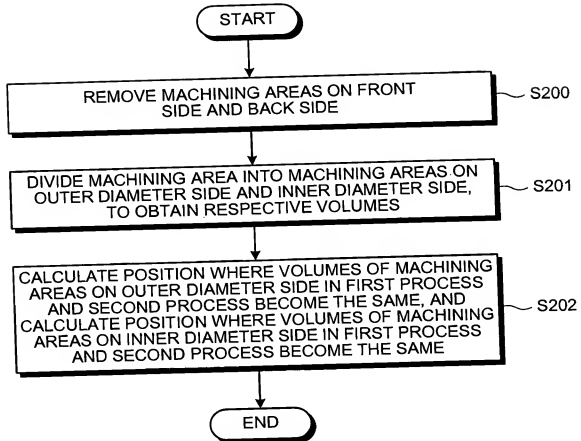


FIG.42B

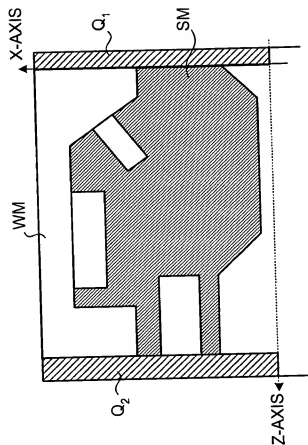


FIG.42D

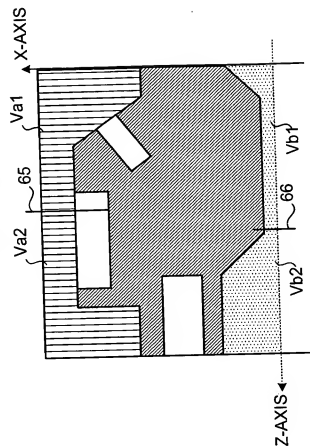


FIG.42A

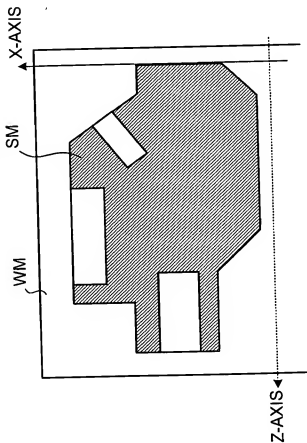


FIG.42C

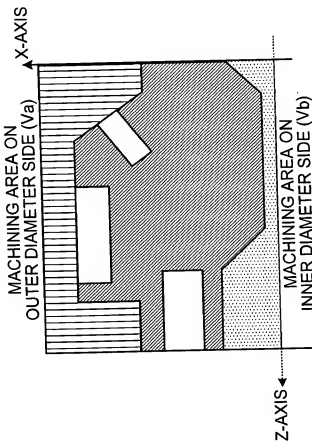


FIG.43

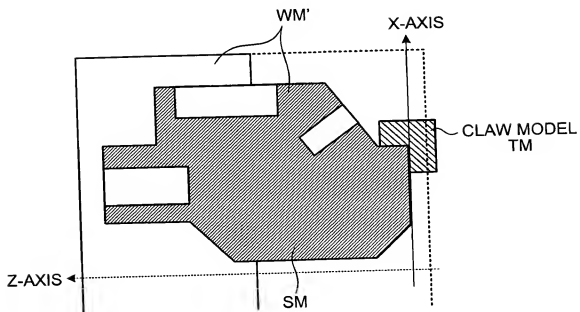


FIG.44

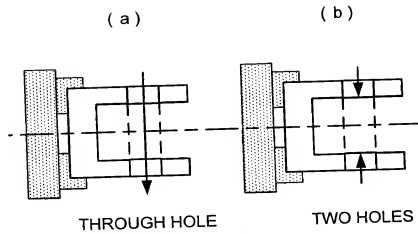


FIG.45

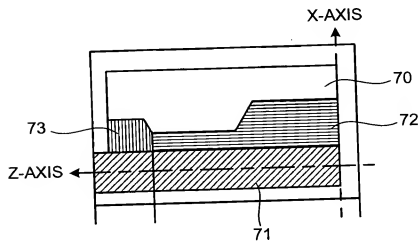


FIG.46

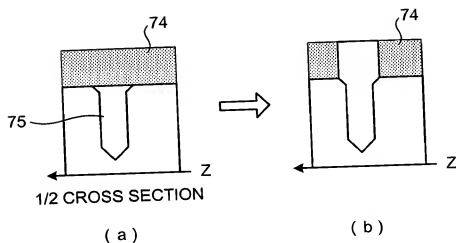


FIG.47

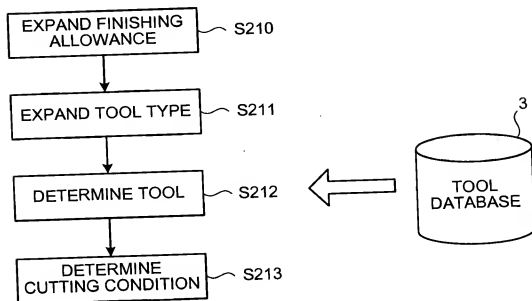


FIG.48

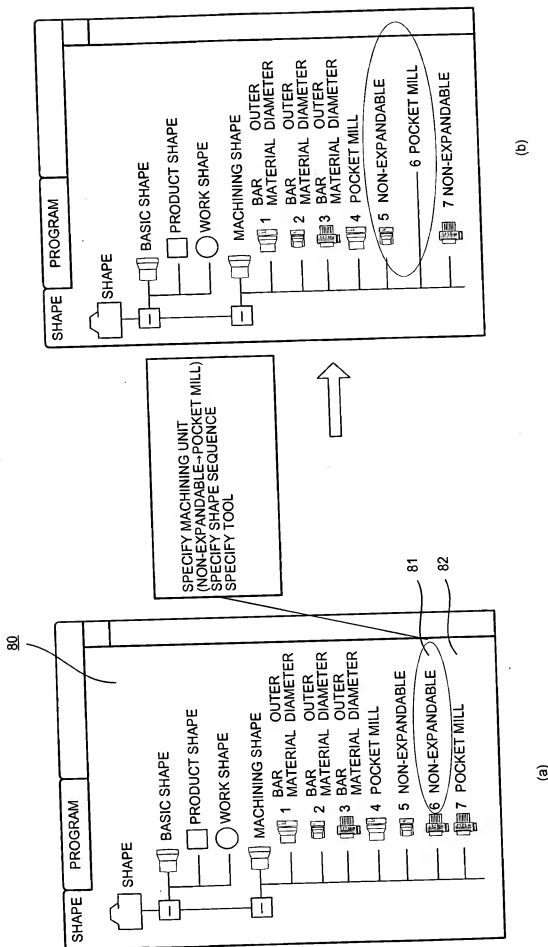


FIG.49

80

85

89

84

86

88

87

91

SHAPE
PROGRAM

.....COMMON

1 FACE MILL

2 FACE MILL

3 FACE MILL

4 FACE MILL

END

UNo.	UNIT	MODE	ANGLE B	POSITION C	ALLOW- ANCE-A	BOT- TOM	WALL	FINISHING ALLOW- ANCE-A	FINISHING ALLOW- ANCE-R
2	FACE MILL	ZY	◆	90.	30.	1.	◆	0.	◆
SNo.TOOL NOMINAL AP- AP- METHOD AFD NOTCH- NOTCH- PERIPHERAL FEED M M									
DIAMETER PROACH 1 PROACH 2 A R SPEED									
R 1 FACE MILL									
FIG	SHAPE	SURFACE	Z	Y	RADIUS	I	J	P	CORNER ROUGHNESS
1	LINE	◆	10.	10.	◆	◆	◆	◆	◆
2	LINE	◆	40.	10.	◆	◆	◆	◆	◆
3	LINE	◆	40.	-10.	◆	◆	◆	◆	◆
4	LINE	◆	0.	-10.	◆	◆	◆	◆	◆
UNo.	UNIT	MODE	ANGLE B	POSITION C	ALLOW- ANCE-A	BOT- TOM	WALL	FINISHING ALLOW- ANCE-A	FINISHING ALLOW- ANCE-R
3	FACE MILL	ZY	◆	90.	30.	1.	◆	0.	◆
SNo.TOOL NOMINAL AP- AP- METHOD AFD NOTCH- NOTCH- PERIPHERAL FEED M M									
DIAMETER PROACH 1 PROACH 2 A R SPEED									
R 1 FACE MILL									
FIG	SHAPE	SURFACE	Z	Y	RADIUS	I	J	P	CORNER ROUGHNESS
1	LINE	◆	10.	10.	◆	◆	◆	◆	◆
2	LINE	◆	40.	10.	◆	◆	◆	◆	◆
3	LINE	◆	40.	-10.	◆	◆	◆	◆	◆
4	LINE	◆	0.	-10.	◆	◆	◆	◆	◆
UNo.	UNIT	MODE	ANGLE B	POSITION C	ALLOW- ANCE-A	BOT- TOM	WALL	FINISHING ALLOW- ANCE-A	FINISHING ALLOW- ANCE-R
2	FACE MILL	ZY	◆	90.	30.	1.	◆	0.	◆
SNo.TOOL NOMINAL AP- AP- METHOD AFD NOTCH- NOTCH- PERIPHERAL FEED M M									
DIAMETER PROACH 1 PROACH 2 A R SPEED									

FIG.50

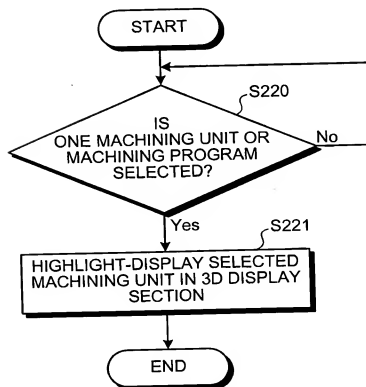


FIG.51A

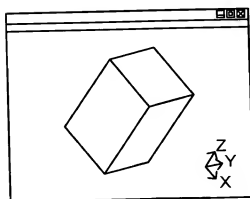


FIG.51B

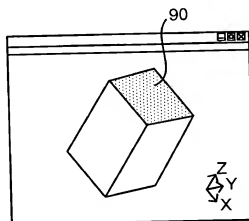


FIG.52

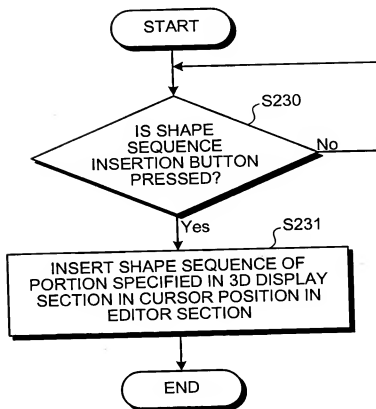


FIG.53

UNIT	NON-EXPANDABLE FIG SHAPE	MODE		X	Y	RADIUS R	I	J	ANGLE B	ANGLE C
		N	Y							
		SURFACE SHIFT Z	SURFACE SHIFT R							
1	LINE (SUPPORT)	0	0	18.487	-29.602				0	0
2	LINE	◆	◆	18.487	-18.5				◆	◆
3	LINE	◆	◆	-18.487	-18.5				◆	◆
4	LINE	◆	◆	-18.487	-29.602				◆	◆
5	LINE	◆	◆	18.487	-29.602				◆	◆

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FIG.54

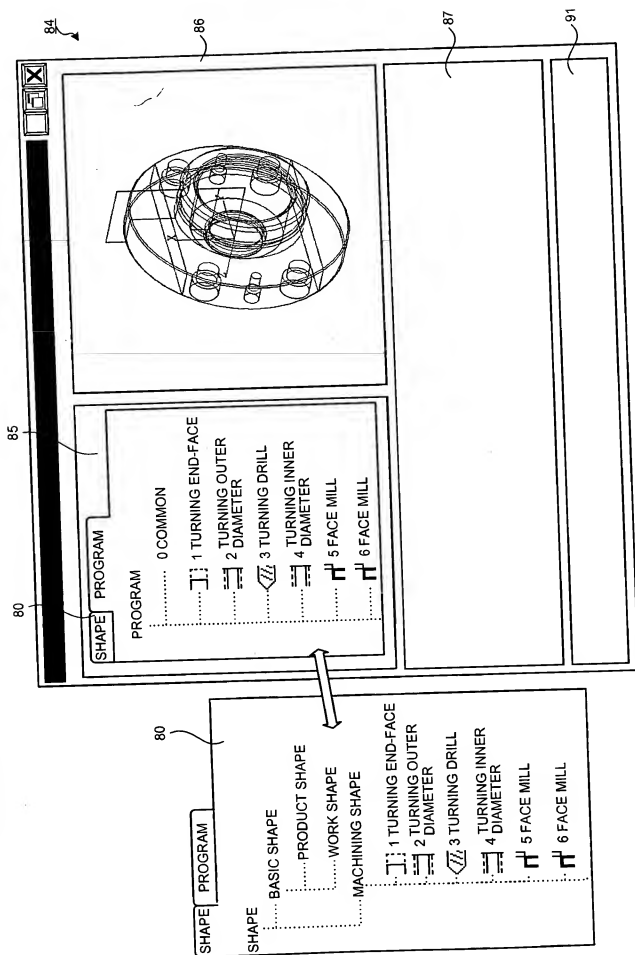


FIG.55

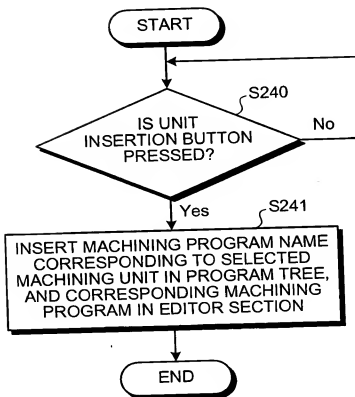
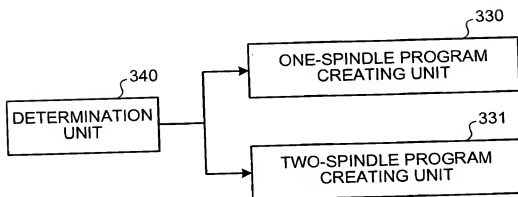


FIG.56



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FIG.57

